

REMARKS

Claims 1-45 are pending. Claims 1-3, 7-9, 12, 15, 16, 18, 19, 23-26, 28, 33, 39-41, 43, and 45 have been rejected, and claims 4-6, 10, 11, 13, 14, 17, 20-22, 27, 29-32, 34-38, 42, and 44 have been objected to as being dependent upon a rejected base claim. Claim 7 is cancelled, and claims 1, 4-6, 8-17, 20, 22, 23, 32, 39-42, and 44 are amended by the present amendment.

The present amendment places all claims in condition for allowance in a manner suggested by the Examiner. Accordingly, Applicants respectfully request entry of this amendment, upon which claims 1-6 and 8-45 will remain pending with claims 1, 4, 5, 6, 10, 14, 16, 17, 20, 22, 23, 39, 40, 41, 42, and 44 being independent claims. Applicants further request withdrawal of the objection to claims 4-6, 10, 11, 13, 14, 17, 20-22, 27, 29-32, 34-38, 42, and 44, as amended, and reconsideration of the final rejection of claims 1-3, 8, 9, 12, 15, 16, 18, 19, 23-26, 28, 33, 39-41, 43, and 45, as amended.

Examiner Interview

Applicants thank the Examiner, and his supervisor John Barlow, for the telephone interview of November 4, 2004 conducted with the undersigned attorney and attorney Lawrence Green. Claim 1 was discussed in view of U.S. Patent No. 4,668,948 to Merkel ("Merkel.") Applicants indicated that Merkel does not teach or suggest that a plugged sensor port is indicated as being plugged in response to a measured fluid variable not crossing a threshold of a range during a predetermined time interval.

The Examiner indicated that addition of the limitation of claim 44, i.e., "reestablishing the range in response to the fluid variable exceeding a threshold of the range," would distinguish the rejected claims over the cited art. As an alternative, the Examiner indicated that a similar limitation, namely the limitation of "reestablishing a threshold of the range in response to the fluid variable exceeding the threshold of the range," would also serve to distinguish over the cited art.

Amendments to the Claims

No amendments have been made to claims 2, 3, 18, 19, 21, 24-31, 33-38, 43, and 45. Claim 37 was previously amended. Claims 44 and 45 were previously added. Independent claim 7 has been cancelled.

Claims 8, 9, 11-13, and 15, which originally depended from claim 7, have been amended to depend from amended independent claim 1.

Claims 4-6, 10, 14, 20, 22, 42, and 44 are amended to incorporate the limitations of their respective base claims, and any intervening claims.

Independent claims 1, 16, 23, and 39-41 are each amended to recite that a threshold of a range is reestablished in response to a fluid variable exceeding the threshold of the range, as suggested by the Examiner. These amendments are supported, for example, by Figure 2, by the Specification at page 5, lines 1-5 and 11-15, page 5, line 29, to page 6, line 3, and page 7, lines 16-18, and by original claim 44.

Claim 32 is amended to correct its dependency.

Accordingly, no new matter has been added.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 1-3, 7-9, 12, 15, 16, 18, 19, 23-26, 28, 39-41, 43, and 45 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,668,948 to Merkel ("Merkel.") Claim 7 is cancelled by the present amendment. Applicants respectfully submit that Merkel does not invalidate any one of claims 1-3, 8, 9, 12, 15, 16, 18, 19, 23-26, 28, 39-41, 43, and 45 because Merkel does not disclose or suggest all of the features recited by any one of independent claims 1, 16, 23, 39, 40 and 41, as amended. This conclusion is supported by the following reasons.

The independent claims include claims 1 and 39 directed to methods, claim 40 directed to a computer readable medium encoded with a program that performs a method, and claims 16, 23, and 41 directed to devices.

Claim 1 recites establishing a range beyond which a fluid variable is expected to vary within a predetermined time interval, reestablishing a threshold of the range in response to the fluid variable exceeding the threshold of the range, and indicating a plugged sensor port in response to the measured fluid variable remaining within the range for the predetermined time interval. Claim 39 recites detecting a plugged sensor port based on a measured fluid variable remaining within a predetermined range for a predetermined period of time, reestablishing a threshold of the range in response to the fluid variable exceeding the threshold of the range, and actuating a clearing mechanism to clear the plugged port in response to the detection. Independent claim 40 recites determining a range beyond which a fluid variable is expected to vary within a predetermined time interval, reestablishing a threshold of the range in response to the fluid variable exceeding the threshold of the range, and indicating a plugged port condition in response to the fluid variable remaining within the range for a predetermined time interval.

Claim 16 recites a controller that establishes a range beyond which a fluid variable is expected to vary within a predetermined time interval, reestablishes a threshold of the range in response to the fluid variable exceeding the threshold of the range, and that indicates a plugged sensor port in response to the measured fluid variable remaining within the range for the predetermined time interval. Claim 23 recites the limitation of a means for determining a range beyond which a fluid variable is expected to vary within a predetermined time interval, a means for reestablishing a threshold of the range in response to the fluid variable exceeding the threshold of the range, and a means for indicating a plugged sensor port in response to the measured fluid variable remaining within the range for the predetermined time interval. Claim 41 recites a controller that establishes a range beyond which a fluid variable is expected to vary within a predetermined time interval, reestablishes a threshold of the range in response to the fluid variable exceeding the threshold of the range, and that indicates a fault condition in response to the measured fluid variable remaining within the range for a predetermined time interval.

Merkel does not disclose or suggest every feature of any one of independent claims 1, 16, 23, and 39-41, as amended, because Merkel does not disclose or suggest reestablishing a

threshold of a range in response to the fluid variable exceeding the threshold of the range, or a controller that reestablishes a threshold of a range in response to a fluid variable exceeding the threshold of the range, or means for reestablishing a threshold of a range in response to a fluid variable exceeding the threshold of the range. Moreover, Applicants respectfully note that the Examiner indicated, during the above-described interview, that the limitation of “reestablishing a threshold of the range in response to the fluid variable exceeding the threshold of the range” is not taught or suggested by Merkel.

Therefore, independent claims 1, 16, 23, and 39-41 are patentable over Merkel. Because claims 1, 16, 23, and 39-41 are patentable over Merkel, Applicants submit that claims 2, 3, 8, 9, 12, 15, 18, 19, 24-26, 28, 43, and 45, which depend directly or indirectly from claim 1, 16, 23, 39, 40, or 41, are patentable as well, for at least the same reasons. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-3, 8, 9, 12, 15, 16, 18, 19, 23-26, 28, 39-41, 43, and 45, as amended, under 35 U.S.C. §102(b).

Rejections Under 35 U.S.C. §103

The Examiner rejected claim 33 under 35 U.S.C. §103(a) as being obvious over Merkel in view of U.S. Patent No. 4,555,712 to Arway et al. (“Arway.”) As described above, independent claim 23, as amended, is novel over Merkel. For the reasons described below, Arway does not remedy the deficiencies of Merkel.

Arway is directed to the use of a valve to introduce a solvent into a process solution to reduce the viscosity of the process solution to maintain a nominal flow rate. Arway teaches measurement of the length of time required for a given volume of ink to flow through an ink jet nozzle. Arway further teaches that a solvent is injected into the ink to maintain the proper viscosity of the ink so that the desired flow rate is achieved. Arway does not disclose or suggest means for reestablishing a threshold of the range in response to the fluid variable exceeding the threshold of the range, as recited by claim 33.

Therefore, claim 33, which depends indirectly from claim 23, is unobvious over Merkel in view of Arway. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 33, as amended, under 35 U.S.C. §103(a).

Allowable Subject Matter

Claims 4-6, 10, 11, 13, 14, 17, 20-22, 27, 29-32, 34-38, 42, and 44 have been indicated to be allowable, although they depend from a rejected base claim. Claims 4-6, 10, 14, 17, 20-22, 42, and 44 are amended to incorporate the limitations of rejected base and intervening claims.

Claims 11 and 13, which originally depended from now cancelled claim 7, have been amended to depend from independent claim 1, as amended. Claims 27, 29-32, and 34-38 continue to depend directly or indirectly from independent claim 23, as amended. For the reasons described above, claims 1 and 23, as amended, are patentable over Merkel. Applicants submit that claims 11, 13, 27, 29-32, and 34-38, which depend directly or indirectly from claim 1 or 23, are patentable as well, for at least the same reasons.

Therefore, Applicants respectfully request reconsideration and withdrawal of the objection to claims 4-6, 10, 11, 13, 14, 17, 20-22, 27, 29-32, 34-38, 42, and 44, as amended.

CONCLUSION

Applicants respectfully request entry of the present amendment, which places all claims in condition for allowance in a manner suggested by the Examiner, withdrawal of the objection to claims 4-6, 10, 11, 13, 14, 17, 20-22, 27, 29-32, 34-38, 42, and 44, as amended, and reconsideration and withdrawal of the final rejection of claims 1-3, 8, 9, 12, 15, 16, 18, 19, 23-26, 28, 33, 39-41, 43, and 45, as amended.

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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